

IN THE CLAIMS

Claims 1-20 are pending in this application. Please amend claims 1-16, and add new claims 17-20 as follows:

1. (Currently Amended) [[An]] A disk-shaped information recording medium on which information is recorded or from which recorded information is produced by irradiating with an energy beam moving on/along a track relative to said medium,

wherein a first location and a second location are located at different locations in a radial direction of the ~~on~~ said medium, data concerning a maximum linear velocity (V1max) and a minimum linear velocity (V1min) at said first location and a maximum linear velocity (V2max) and a minimum linear velocity (V2min) at said second location are recorded at a predetermined location on said medium, and ~~the predetermined location is in an available linear velocity range~~ the first location and the second location are set to a pair of edge portions of an area in which a predetermined control mode of the disk-shaped information recording medium can be performed,

wherein the predetermined control mode includes at least one of a kind of a method for controlling rotation of the disk-shaped information recording medium, recording power, a recording pulse and a relative moving speed of the energy beam.

2. (Currently Amended) [[An]] A disk-shaped information recording medium according to claim 1,

wherein said predetermined location on said medium lies in a control data zone in which data concerning said medium are recorded.

3. (Currently Amended) [[An]] A disk-shaped information recording medium according to claim 1,

wherein at least one of undermentioned conditions is satisfied:

$r1 < r2$, and

$V1max < V2max$ or

$V1min < V2min$

where $r1$ represents a radial distance of said first location from a center of said medium and

r2 represents a radial distance of said second location from said center of said medium.

4. (Currently Amended) ~~[[An]]~~ A disk-shaped information recording medium according to claim 3,

wherein conditions that $r1 < r2$ and that $V1min/r1 \leq V2max/r2$ are satisfied,

where r1 represents a radial distance of said first location from a center of said medium and

r2 represents a radial distance of said second location from said center of said medium.

5. (Currently Amended) ~~[[An]]~~ A disk-shaped information recording medium according to claim 3,

wherein condition that $V1max < V2min$ is additionally satisfied.

6. (Currently Amended) ~~[[An]]~~ A disk-shaped information recording medium according to claim 1,

wherein at least some of recording/reproducing conditions corresponding to said maximum linear velocities (Vmax) and said minimum linear velocities (Vmin) at said first and second locations, respectively, are recorded at said predetermined location.

7. (Currently Amended) A method of controlling ~~[[an]]~~ disk-shaped information recording medium on which information is recorded or from which recorded information is reproduced by irradiating with an energy beam moving on/along a track relative to said medium, a first location and a second location being located at different radial locations on said medium, wherein data concerning a maximum linear velocity (V1max) and a minimum linear velocity (V1min) at said first location and a maximum linear velocity (V2max) and a minimum linear velocity (V2min) at said second location, are recorded at a predetermined location on said medium, ~~the predetermined location being in an available linear velocity range~~ the first location and the second location being set to a pair of edge portions of an area in which a

predetermined control mode of the disk-shaped information recording medium can be performed,

said method comprising the steps of:

reproducing said data in precedence to recording or reproduction of the information;

controlling relative moving speed of said energy beam such that the linear velocity at said first location lies between said maximum linear velocity (V1max) and said minimum linear velocity (V1min); and

controlling the relative moving speed of said energy beam such that the linear velocity at said second location lies between said maximum linear velocity (V1max) and said minimum linear velocity (V2min).

8. (Currently Amended) [[An]] A method of controlling a disk-shaped information recording medium control ~~method~~ according to claim 7,

wherein control of said relative moving speed of said energy beam is realized by controlling a rotation speed of said medium.

9. (Currently Amended) [[An]] A method of controlling a disk-shaped information recording medium control ~~method~~ according to claim 8,

wherein a method of controlling the rotation speed for information recording is performed by one of a control method selected from a group consisting of a constant angular velocity (CAV) control with a rotation speed (rpm) being constant, a constant linear velocity (CLV) control with a linear velocity being constant and a combination of said constant angular velocity (CAV) control and said constant linear velocity (CLV) control, and

wherein the control method to be actually employed is determined on the basis of result of reproduction of said data.

10. (Currently Amended) [[An]] A method of controlling a disk-shaped information recording medium control ~~method~~ according to claim 7,

wherein the linear velocities at other locations than said first and second locations are determined through a linear interpolation between said minimum linear velocity (V1min) at said first location and said minimum linear velocity (V2min) at

said second location and between said maximum linear velocity ($V1_{max}$) at said first location and said maximum linear velocity ($V2_{max}$) at said second location.

11. (Currently Amended) [[An]] A method of controlling a disk-shaped information recording medium control ~~method~~ according to claim 7,
wherein said information recording medium includes a reflective layer, thickness of which is gradually decreased from a radially inner side of said medium toward a radially outer side of said medium, and
wherein a constant angular velocity (CAV) control is adopted for controlling a rotation of said medium.
12. (Currently Amended) [[An]] A method of controlling a disk-shaped information recording medium control ~~method~~ according to claim 7,
wherein a rotation of said medium is controlled through a constant angular velocity (CAV) control at a radially inner zone of said medium while being controlled through a constant linear velocity (CLV) control at a radially outer zone of said medium.
13. (Currently Amended) [[An]] A method of controlling a disk-shaped information recording medium control ~~method~~ according to claim 7,
wherein said data are set as initial values with information of previously recorded control data, and optimum conditions are determined by a learning control.
14. (Currently Amended) [[An]] A method of controlling a disk-shaped information recording medium control ~~method~~ according to claim 7,
wherein said data are determined on the basis of jitter.
15. (Currently Amended) An information recording method of recording information on [[an]] disk-shaped information recording medium by irradiating with an energy beam moving on/along a track relative to said medium,
said method comprising the steps of:
reading data concerning a maximum linear velocity ($V1_{max}$) and a minimum linear velocity ($V1_{min}$) at a first location on said medium and a maximum linear

velocity (V_{2max}) and a minimum linear velocity (V_{2min}) at a second location on said medium, said first and second locations being located at different locations in a radial direction of the disk-shaped ~~on said~~ medium, and said data being recorded at a predetermined location on said medium,

~~the predetermined location being in an available linear velocity range~~ the first location and the second location being set to a pair of edge portions of an area in which a predetermined control mode of the disk-shaped information recording medium can be performed; and

recording the information on said medium by controlling a relative speed between said medium and said energy beam on the basis of said data.

16. (Currently Amended) An information reproducing method of reproducing information from an information recording medium recorded the information by irradiating with an energy beam moving on/along a track relative to said medium,

said method comprising the steps of:

reading data concerning a maximum linear velocity (V_{1max}) and a minimum linear velocity (V_{1min}) at a first location on said medium and a maximum linear velocity (V_{2max}) and a minimum linear velocity (V_{2min}) at a second location on said medium, said first and second locations being located at different locations on said medium, and said data being recorded at a predetermined location on said medium, ~~the predetermined location being in an available linear velocity range~~ the first location and the second location being set to a pair of edge portions of an area in which a predetermined control mode of the disk-shaped information recording medium can be performed; and

reproducing the information recorded on said medium by controlling a relative speed between said medium and said energy beam on the basis of said data.

17. (New) A disk-shaped information recording medium according to claim 1, wherein the predetermined control mode includes a recording condition for the disk-shaped information recording medium with a predetermined performance.

18. (New) A method according to claim 7, wherein the predetermined control mode includes a recording condition for the disk-shaped information recording medium with a predetermined performance.
19. (New) An information recording method according to claim 15, wherein the predetermined control mode includes a recording condition for the disk-shaped information recording medium with a predetermined performance.
20. (New) An information recording method according to claim 16, wherein the predetermined control mode includes a recording condition for the disk-shaped information recording medium with a predetermined performance.